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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,313	02/28/2007	Wesley R. Thielke	3520-221US//P28441-A USA	7186
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FOX ROTHSCHILD LLP P O BOX 592 112 NASSAU STREET PRINCETON, NJ 08542-0592			BEHNAMIAN, SHAHRIAR	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/595,313	<b>Applicant(s)</b> THIELKE ET AL.	
	<b>Examiner</b> SHAHRIAR BEHNAMIAN	<b>Art Unit</b> 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/06/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

1. This Office Action is in response to the Applicant's communication filed on 28 February 2007.

Claims 1-34 are pending in this office action.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 06 April 2006, the submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

3. The drawings submitted on 06 April 2006. These drawings are reviewed and accepted by the examiner.

### ***Specification***

4. The abstract of the disclosure is objected to. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

5. Claim 15 is objected to because of the following informalities: "The method of claim 1 further..." is assumed to be "The claim of 9 further...".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. **Claim 16** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. **Claim 16 is claiming a computer-readable medium.** The computer-readable medium is not specifically defined in the application's specification and is assumed to be as directed to a signal and hence non-statutory (see Applicant's instant application page 18, lines 1-5). For example, "a claimed computer-readable medium encoded with the data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory." – MPEP 2106.IV.B.1 (a). The claimed invention must fall within one of the four statutory categories. A "machine", "manufacture", and "composition of matter" all define things or products. A "process" defines action i.e. inventions that set forth a series of steps or acts to be performed. Process claims must also be tied to another Statutory Class

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(such as a particular apparatus) or transform underlying subject matter (such as articles or materials) to a different state or thing.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-4, 8-11, 15-20, 22-24, 26, 27, 30, 32 and 34 are rejected under 35

U.S.C. 102(e) as being anticipated by US Pub. No. 2004/0085896 to Banerjea et al

("Banerjea").

**As per claim 1**, Banerjea discloses an apparatus for intelligent, seamless switching between a plurality of data or communications networks (see Fig. 3 and associated text; pars. 0006 and 0028; provides a dynamic channel selector for use with a wireless local area network; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable for communicating the data generated by the application running on the device), comprising:

a mobile electronics device (**Fig. 1 and associated text; par. 0015**);

a network connection means, operable on said mobile electronics device,  
for connecting said mobile electronics device to said plurality of networks (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028**);

a network monitoring means capable of measuring at least one quality of connection parameter for said plurality of networks (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable**); and

a selection means, responsive to at least one pre-selected user preference and responsive to said at least one quality of connection parameter, for selectively connecting said mobile electronics device to one of said networks (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable**).

**As per claim 2**, Banerjea discloses an apparatus where said network connection means is capable of establishing a wireless connection to at least one of said plurality of networks (**Fig. 1 and associated text; pars. 0014, 0015**).

**As per claim 3**, Banerjea discloses an apparatus wherein said selection means further comprises:

means for detecting a network (**Figs. 1, 3 and associated text; pars. 0014, 0015**);

means for processing said client preferences (**Figs. 1, 3 and associated text; pars. 0014, 0015, 0021; an assigned priority to a channel is a client preference**); and

means for detecting data traffic (**Fig. 1 and associated text; pars. 0014, 0015, 0017, 0019; monitoring channel quality, which is related to the data traveling over the certain channel**).

**As per claim 4**, Banerjea discloses an apparatus wherein said pre-selected user preference is one or more of a network identifier, an application's connection-driving parameter, a network detection mode, a mode of operation and a pre-assigned network priority (**Figs. 1, 3 and associated text; pars. 0014, 0015, 0016, 0021; an assigned priority to a channel (i.e. network, or frequency band) is a client preference**).

**As per claim 8**, Banerjea discloses an apparatus further comprising means for providing said quality of connection parameter to an application running on said mobile electronic device (**pars. 0025-0027; an interface to an application running on the MS enables communication, i.e. the application is the driver of data generation**).

**As per claim 9, 16 and 17**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 1.

**As per claim 10**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 2.

**As per claim 11**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 4.

**As per claim 15**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 8.

**As per claim 18 and 22**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claims 1-3.

**As per claim 19**, Banerjea discloses a method wherein said step of automatically selecting is further responsive to at least one pre-loaded rule comprising a factor for minimizing a data transmission cost (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable; wherein by choosing the best channel quality presents a minimization of data transmission cost**).

**As per claim 20**, Banerjea discloses a method wherein said step of automatically selecting is further responsive to at least one pre-loaded rule comprising a factor for maximizing data transmission integrity (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260**



**allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable; wherein by choosing the best channel quality presents a maximization of data transmission integrity).**

**As per claim 23**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 19.

**As per claim 24**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 20.

**As per claim 26**, Banerjea discloses a method wherein said step of sending data further comprises selectively sending said data from said application dependent on said network selected (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 selectively connects to a preferred network and sends data**).

**As per claim 27**, Banerjea discloses a method further comprising the steps of switching said communications connection from a first selected network to a second selected network (**Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable**); and

informing said remote server of said switching (**as to keep the communication link established, it is inherent to inform the remote server of**

**said switching as to send the data over the new channel, otherwise communication will be lost).**

**As per claim 30**, Banerjea discloses a method further comprising the steps of maintaining session persistence by said remote server and said mobile electronics device using said shared network information; and maintaining application persistence by said remote server and said mobile electronics device using said shared network information **(see Banerjea, par. 0024; the management information comprises the shared network information, such as Extended Service Set Identification (ESSID), and maintains application persistence using this information).**

**As per claim 32**, Banerjea discloses a method further comprising the step of pushing data by said remote server, responsive to said informing, to said mobile electronics device either prior to or after said switching **(Figs. 1, 3 and associated text; pars. 0006, 0015 and 0028; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable, and hence after the switch the remote server pushes the data over the new connection).**

**As per claim 34**, Banerjea discloses a method further comprising the steps of providing an application programming interface; and notifying, by said network switching software module, said one or more applications running on said mobile electronics device network of one or more network connectivity

parameters via said application programming interface thereby initiating said step of sending said data from said application to said remote server (**see Fig. 3 and associated text; pars. 0006 and 0028; provides a dynamic channel selector for use with a wireless local area network; The dynamic channel selector 260 allows the quality of a wireless channel employed by a wireless client to be monitored and the channel changed if the quality becomes unacceptable for communicating the data generated by the application running on the device).**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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9. Claims 5, 6, 12, 13, 2125, 28, 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. No. 2004/0085896 to Banerjea et al ("Banerjea") in view of US Pub. No. 2004/0205158 to Hsu.

As per **claim 5**, Banerjea fails to teach, however Hsu discloses an apparatus wherein said mode of operation is selected from an always-on mode and a connect-on-demand mode (**see Hsu, par. 0084; as preserve power, the mobile station (MS) applies a power saving mode and wakes up to check for incoming transmissions at predetermined times, and inherently also wakes up when there is data to be sent, since it can't send data when it is in sleep mode**). It would have been obvious to a person with ordinary skills in the art at the time the invention was made to incorporate a power saving mode as disclosed by Hsu in the apparatus of Banerjea as to conserve power (par. 0084).

As per **claim 6**, Banerjea as modified by Hsu discloses an apparatus wherein said connect-on-demand mode comprises only connecting to one of said networks when said means for detecting data traffic indicates an application requiring network access (**see Hsu, par. 0084; as preserve power, the mobile station (MS) applies a power saving mode and wakes up to check for incoming transmissions at predetermined times, and inherently also wakes up when there is data to be sent, since it can't send data when it is in sleep mode**).

As per **claim 12**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 5.

**As per claim 13**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 6.

**As per claim 21**, Banerjea fails to teach, but Hsu discloses a method further comprising detecting, by said network switching software module running on said mobile electronics device, said data required to be sent by said one or more applications and, when no data is required to be sent, disconnecting said communications connection (**see Hsu, par. 0084; as preserve power, the mobile station (MS) applies a power saving mode and wakes up to check for incoming transmissions at predetermined times, and inherently also wakes up when there is data to be sent; once transmission has ended and no further data is to be transmitted, the MS returns to the sleep mode**). It would have been obvious to a person with ordinary skills in the art at the time the invention was made to incorporate a power saving mode as disclosed by Hsu in the apparatus of Banerjea as to conserve power (par. 0084).

**As per claim 25**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 21.

**As per claim 28**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 5.

**As per claim 29**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 6,

wherein only transmitting when new data has arrived (i.e. sleep mode), is the optimization of an application protocol.

**As per claim 33**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 29.

10. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. No. 2004/0085896 to Banerjea et al ("Banerjea") in view of US Pat. No. 7363260 to Stamler et al. ("Stamler").

**As per claim 7**, Banerjea fails to disclose, but Stamler discloses an apparatus wherein said quality of connection parameter is one or more of a ping interval, a ping-offset, and a ping timeout (**see Stamler, Table 1; col. 14, lines 32-44**). It would have been obvious to a person with ordinary skills in the art at the time the invention was made to incorporate a predetermined ping interval for the connection as disclosed by Stamler in the apparatus of Banerjea as to establish a connection to the station of interest meeting these quality criteria (see Stamler, col. 14, lines 32-44).

**As per claim 14**, the limitations are similar to those treated in the above rejection(s), and hence are met by the same reference(s) as discussed claim 7.

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11. Claims 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pub. No. 2004/0085896 to Banerjea et al ("Banerjea") in view of US Patent No. 6614781 to Elliott et al. ("Elliott").

As per claim 31, Banerjea fails to teach, but Elliott (6614781) discloses a method wherein said step of maintaining session persistence further comprises the step of mimicking a first set of network parameters from said first selected network when using said second selected network, thereby maintaining session persistence via virtual addressing (**see Elliott, Fig 11A and associated text; col. 68, lines 44-55**). It would have been obvious to a person with ordinary skills in the art at the time the invention was made to incorporate a virtual addressing technique as disclosed by Elliott in the method of Banerjea as to provide a soft switch between the two networks (see Elliott, col. 68, lines 44-55).

### ***Conclusion***

Note: Examiner has pointed out particular references contained in the prior arts of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed

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invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

Prior arts made of record, not relied upon:

US 2002/0031131 to Ymini et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHAHRIAR BEHNAMIAN whose telephone number is (571)270-3197. The examiner can normally be reached on Mon-Thur 7:00-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kent Chang can be reached on 571-272-7667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SHAHRIAR BEHNAMIAN  
Examiner  
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/Kent Chang/

Supervisory Patent Examiner, Art Unit 2617